

**REMARKS**

Claims 1-37 remain pending in the application. The Office Action of March 3, 2003 indicated that claims 1-8 were allowable, claims 9, 11-16, 18-20, 22-27, 29 and 31-36 were rejected, and claims 10, 17, 21, 28, 30 and 37 were objected to.

Rejection of Claims 18 and 19 as Anticipated in View of U.S. Patent 6,414,557 to Liu.  
Regarding claims 18 and 19, applicants assert that Liu does not contain all the recited features of these claims. Claim 18 is shown below

18. A method for reducing jitter in a voltage-controlled oscillator having a plurality of voltage-controlled oscillator cells, **each** voltage-controlled oscillator cell having a plurality of output voltage waveforms, the method comprising:

combining **each** of the output voltage waveforms to produce a combined waveform;

deriving a common mode feedback waveform from the combined waveform and from a reference waveform; and

transmitting the common mode feedback waveform to each of the plurality of voltage-controlled oscillator cells.

Claim 18 positively sets forth, *inter alia*, a plurality of voltage controlled oscillator cells, wherein **each** cell has a plurality of output signals, and further that **each** of these output signals are combined together.

One difference between claim 18 and the Liu reference is subtle, but Liu does not "combine each" of the plurality of output signals from the voltage controlled oscillator cells. Every single individual voltage controlled oscillator cells of Liu is connected to it's own individual common mode circuit 540. Liu combines one output voltage signal to one reference signal in every cell, and then connects this output signal to the next cell. Liu's connection of the output of

one cell to the input of the next cell is not simultaneously connecting **each** or all the outputs together. Therefore the operation of Liu does not read on "combining each of the output voltage waveforms to produce a combined waveform" as recited.

The statement in the Office Action that a combined voltage is "inherent when signal lines are connected together" may be true, however the claims call for more than a "combined voltage". The claim language specifically calls for the "*outputs of each cell to be combined*" not merely a combination of signals. Again the subtle distinction of the claim language is that combining "*each*" signal means each and every output signal simultaneously in the same device. The cells of Liu connect one output to the next input, which does not perform the same function as the global common mode control circuit 104 (shown in Figure 6) of the instant application.

In sum, Applicants hope the above clarification of the distinctions between claim 18 and Liu helpful. Applicants believe that claims 18-19 define over Liu, and request that the rejection be withdrawn.

Rejection of Claims 9, 20 and 29 in view of U.S. Patent 6,456,167 to Huang.

With respect to the rejection of claims 9, 20 and 29, the feature of "a common mode feedback circuit that simultaneously receives signals from each voltage controlled oscillator cell", has been added to each of these independent claims. This feature, together with the other features in these claims, are not shown in the Huang reference. Huang discloses only 2 voltage controlled cells connected together as a coupled pair. This type of arrangement is used to generate standard quadrature signals unlike the present invention. There is further no teaching of any type of common mode circuit in Huang. Therefore it is submitted that claims 9, 20, and 29 define over the art of record.

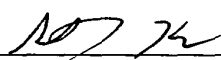
In view of the foregoing, the claims pending in the application comply with the requirements of 35 U.S.C. § 112 and patentably define over the prior art. A Notice of Allowance is, therefore, respectfully requested. If the undersigned has overlooked relevant teaching in any of the references, the Examiner is requested to point out specifically where such teaching may be found. If the Examiner has any questions or believes a telephone conference would expedite prosecution of this application, the Examiner is encouraged to call the undersigned at (202) 434-1630.

Respectfully submitted,

Perkins Coie LLP

Date: \_\_\_\_\_

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